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(71) Applicant: **ANRITSU CORP**
 (72) Inventor: **TARUI MASAHIRO**
SUZUKI YASUMOTO
TANAKA TOSHIHARU

(54) **METAL DETECTOR**

able the selection of frequencies according to the test object and the type of metal to be detected.

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(57) Abstract:

PURPOSE: To achieve a highly sensitive detection by providing a divider adapted to select any one of a plurality of demultiply frequencies with a selector switch between an oscillator and a transmission coil in a detector of metal mixed into a test object.

CONSTITUTION: Oscillation frequencies of an oscillator 1 is divided with a divider 2 and converted with a voltage amplifier 3 into a sine wave, which is fed to a transmission coil P of a detection coil section 4. An unbalanced output is produced from a balance circuit 5 only when metal exists in a test object passing between the transmission coil P and receiving coils S1 and S2 and the mixing of the metal is detected by a detection circuit 10. The divider 2 is so arranged that for example, three kinds of frequencies can be selected with a selector switch 21. The oscillation frequency of the oscillator 1 is divided with a 1/4 divider 22, a 1/3 divider 23 and a 1/2 divider 24 and connected to terminals aWc of the switch 21. The 1/2 divider 24 is provided at the final stage of the divider 2. This en-

